

CLAIMS

1. A heat-shrinkable polyester type film,
wherein the film has a shrinkage ratio 50% or higher in the main shrinkage direction when being immersed in hot water at 95°C for 10 seconds,
the film has a dynamic friction coefficient of at least one face with one face of another film of $\mu_d \leq 0.27$ and range $R \leq 0.05$, and
a weight loss per unit surface area of the treated part of less than 0.24 g/m² after 10 reciprocation times when the film is subjected to reciprocating abrasion treatment under conditions of 30 reciprocation times/min in 100 mm reciprocating distance with 400 g load using a color fastness rubbing tester comprising a friction element (surface radius 45 mm; arc 50 mm; and width 25 mm) to which two sheets of gauze and a sand paper with #1000 particle diameter are attached in a manner that the sand paper is set in the front face side while the film sample is set on a sample stand (surface radius 200 mm) in a manner that the face having a smaller friction coefficient is set in the front face side.

2. The heat-shrinkable polyester type film according to claim 1,
wherein the dynamic friction coefficient of at least one face with one face of another film is $\mu_d \leq 0.25$ and range $R \leq 0.03$.

3. The heat-shrinkable polyester type film according to claim 1 or 2,
wherein the weight loss is less than 0.20 g/m² after the face of the film is subjected to reciprocating abrasion 10 times with 400 g load using a color fastness rubbing tester comprising a friction element bearing a sand paper

with #1000 particle diameter.

4. The heat-shrinkable polyester type film according to claim 1, 2 or 3, wherein a surface specific resistance of at least one face of the film satisfies $\log\Omega < 14.0$.

5. The heat-shrinkable polyester type film according to claim 1, 2 or 3, wherein a surface specific resistance of at least one face of the film satisfies $\log\Omega < 12.0$.

6. The heat-shrinkable polyester type film according to claim 1, wherein one face of the film is capable to be bonded to the other face by an organic solvent.

7. The heat-shrinkable polyester type film according to claim 1, wherein on the easily slipping face is provided an easily slipping layer containing a polyester type resin or a polyurethane type resin as a binder.

8. The heat-shrinkable polyester type film according to claim 1, wherein on the easily slipping face is provided an easily slipping layer containing a lubricant component 10 to 60% by weight in 100% by weight of the layer.

9. The heat-shrinkable polyester type film according to claim 7 or 8, wherein a deposition amount of the easily slipping layer is 0.002 to 0.2 g/m².

10. The heat-shrinkable polyester type film according to claim 7 or 8, wherein the easily slipping layer contains a sulfonic acid type component 1 to 40% by weight in 100% by weight of the layer.

11. A method for producing heat-shrinkable polyester type film according to claim 7 or 8, comprising applying a coating solution for the easily slipping layer containing a lubricating component and a sulfonic acid type component to at least one face of a non-oriented polyester type film or a uniaxially oriented polyester type film obtained by melt extrusion, and then uniaxially or uniaxially drawing the coated film.

12. A heat-shrinkable polyester type film comprising mainly a polyester resin and having an insertion resistance to a PET bottle of 0.8 N or lower when the film is bonded into a tubular shape (hereinafter referred to as a label), wherein the insertion resistance is value measured in as follows: a label with 120 mm height and 175 mm in folding diameter and having an easily slipping face in the inner face side is produced: from a 2 liter-capacity PET bottle (manufactured by CCJC: height 307 mm) used for Sokenbicha is cut off an upper portion from 245 mm height, and the label is put on: the maximum resistance value is measured using Strograph (V10-C model) manufactured by Toyo Seiki in compression mode (crosshead speed: 200 mm/min) when the label is pushed down from the upper part and the value is defined as the label insertion resistance (the number of measurement times = 20): and also the maximum resistance value is measured in a state that

water is sprayed to the PET bottle (the number of measurement times = 20).

13. The heat-shrinkable polyester type film according to claim 12, wherein total luminous transmittance is 40% or lower, and hot water shrinkage ratio by treatment at 98°C for 10 seconds is 40% or higher in the main shrinkage direction and 10% or lower in the direction orthogonal to the main shrinkage direction.

14. The heat-shrinkable polyester type film according to claim 12 or 13, being excellent in a solvent bonding property.

15. The heat-shrinkable polyester type film according to claim 12, 13 or 14, having at least one layer containing fine particles and an incompatible resin.